

## PATENT COOPERATION TREATY

## PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

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Applicant's or agent's file reference 100.0037PCT	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/US04/31898	International filing date (day/month/year) 29 September 2004 (29.09.2004)	Priority date (day/month/year) 30 September 2003 (30.09.2003)
International Patent Classification (IPC) or national classification and IPC IPC(7): A61F 2/06 and US Cl.: 623/1.15, 1.17, 1.19, 1.2, 1.42		
Applicant ALVEOLUS INC.		
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>3</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of <u>2</u> sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> <p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>		
Date of submission of the demand 28 July 2005 (28.07.2005)	Date of completion of this report 14 September 2005 (14.09.2005)	
Name and mailing address of the IPEA/US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Authorized officer Alvin J. Stewart <i>Sharon N. Greene for</i> Telephone No. 703-308-0858	

Form PCT/IPEA/409 (cover sheet)(April 2005)

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/US04/31898

## Box No. I Basis of the report

1. With regard to the language, this report is based on:

- ☐ the international application in the language in which it was filed.
- ☐ a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
- ☐ publication of the international application (under Rule 12.4(a))
- ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a))

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☐ the international application as originally filed/furnished
- ☒ the description:  
pages 1-17 as originally filed/furnished  
pages\* NONE received by this Authority on \_\_\_\_\_  
pages\* NONE received by this Authority on \_\_\_\_\_
- ☒ the claims:  
pages NONE as originally filed/furnished  
pages\* NONE as amended (together with any statement) under Article 19  
pages\* 19 and 20 received by this Authority on 28 July 2005 (28.07.2005)  
pages\* NONE received by this Authority on \_\_\_\_\_
- ☒ the drawings:  
pages 1/2-2/2 as originally filed/furnished  
pages\* NONE received by this Authority on \_\_\_\_\_  
pages\* NONE received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/US04/31898**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims <u>1-6</u>	YES
	Claims <u>NONE</u>	NO
Inventive Step (IS)	Claims <u>1-6</u>	YES
	Claims <u>NONE</u>	NO
Industrial Applicability (IA)	Claims <u>1-6</u>	YES
	Claims <u>NONE</u>	NO

**2. Citations and Explanations (Rule 70.7)**

Claims 1-6 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest a stent comprising a scaffolding configured to define a substantially cylindrical member having a distal end and a proximal end extending longitudinally there between including at least three consecutive circumferential bands, each of the circumferential bands having peaks and valleys and a plurality of flexible connectors extending between adjacent ones of the circumferential bands, such that when pressure is extended along varying points of the longitudinal extension of the appliance, the appliance does not undesirably foreshorten or elongate.

Claims 1-6 meet the criteria set out in PCT Article 33(4), and thus meet industrial applicability because the subject matter claimed can be made or used in industry.

----- NEW CITATIONS -----

**CLAIMS:**

1. A medical appliance for placement within a portion of the anatomy of a patient, the appliance comprising:

a scaffolding, the scaffolding configured to define a substantially cylindrical member having a distal end and a proximal end and extending longitudinally there between, forming a lumen there through, said scaffolding including:

at least three consecutive circumferential bands, each of the circumferential bands having peaks and valleys and

a plurality of flexible connectors extending between adjacent ones of the circumferential bands, each of said connectors connecting one of the peaks to one of the valleys;

such that when pressure is extended along varying points of the longitudinal extension of the appliance, the appliance does not undesirably foreshorten or elongate.

2. The medical appliance of claim 1, wherein the medical appliance scaffolding comprises a transition metal.

3. The medical appliance of Claim 2, wherein the transition metal is radioactive.

4. The medical appliance of Claim 3, wherein the radioactive signal is provided in a pharmaceutically acceptable amount to treat the target tissue with minimal collateral tissue exposure.

5. The medical appliance of Claim 1, wherein the medical appliance is radially contractable in response to exposure to a magnetic field.

6. A method of treating a patient with an obstruction inside a medical implant, comprising the steps of:

providing a medical appliance comprising a scaffolding, the scaffolding configured to define a substantially cylindrical member having a distal end and a proximal end and extending longitudinally there between, forming a lumen there through, along the longitudinal extension of the appliance the scaffolding forms geometrical patterns formed by angles, wherein the angles determine the relative flexibility of the medical appliance such that the appliance conforms to the topography of a target lumen and when pressure is exerted along varying points of the longitudinal extension of the appliance, the appliance does not undesirably foreshorten or elongate;

activating medical appliance contraction to force the obstruction to migrate; and

activating expansion of the medical appliance to the pre-contracted state.